



Designing Maps for Offset Print Production

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Going from your head

to your computer

to pieces of film

to metal plates

to paper

to the world

**What message do you want
the map to convey?**

What are your options?

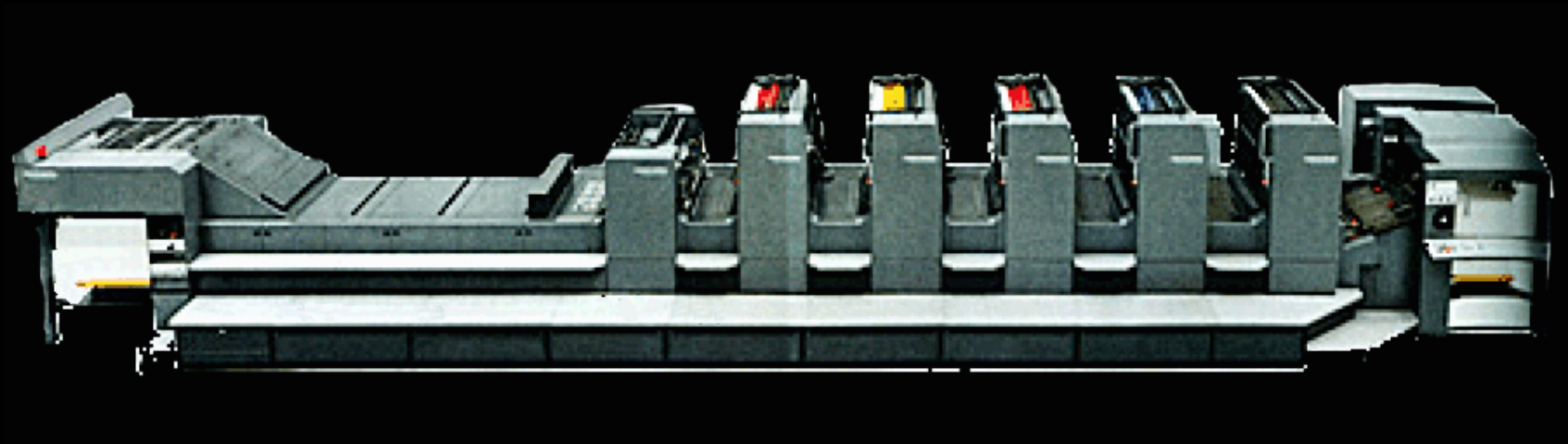
How many copies will you produce?

What size?

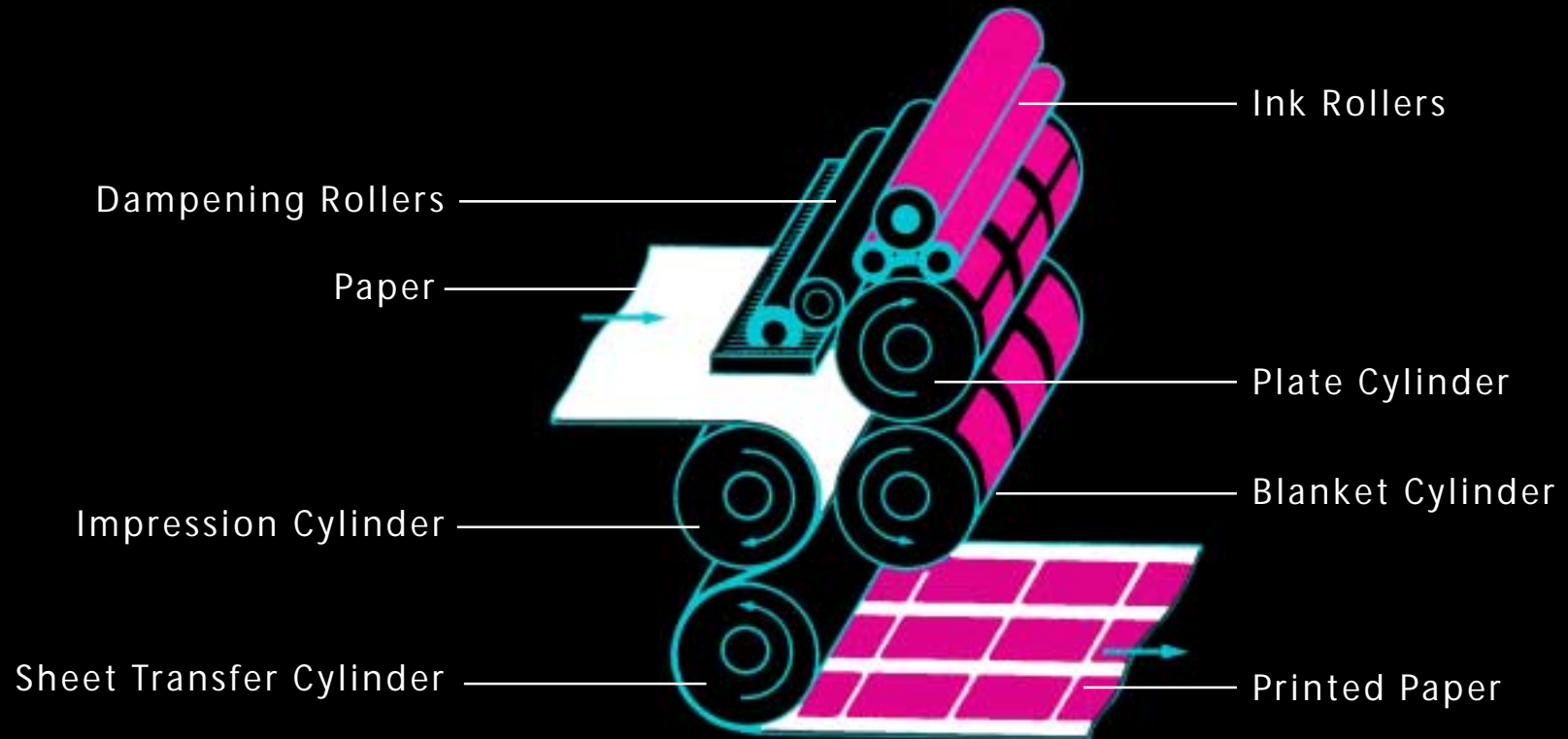
How many colors?

What graphic style is appropriate?

Offset Lithography



Offset Lithography



Color Models

RGB

red green blue

HSV

hue saturation value

INDEX

256 colors or less

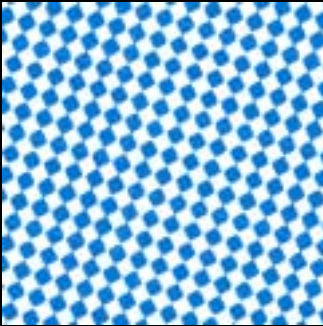
CMYK

cyan magenta yellow black

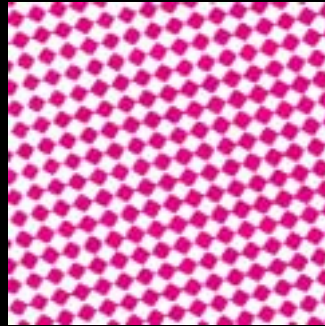
Pantone

color formula inks

Process Color: CMYK



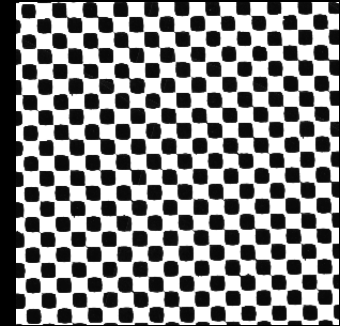
cyan



magenta

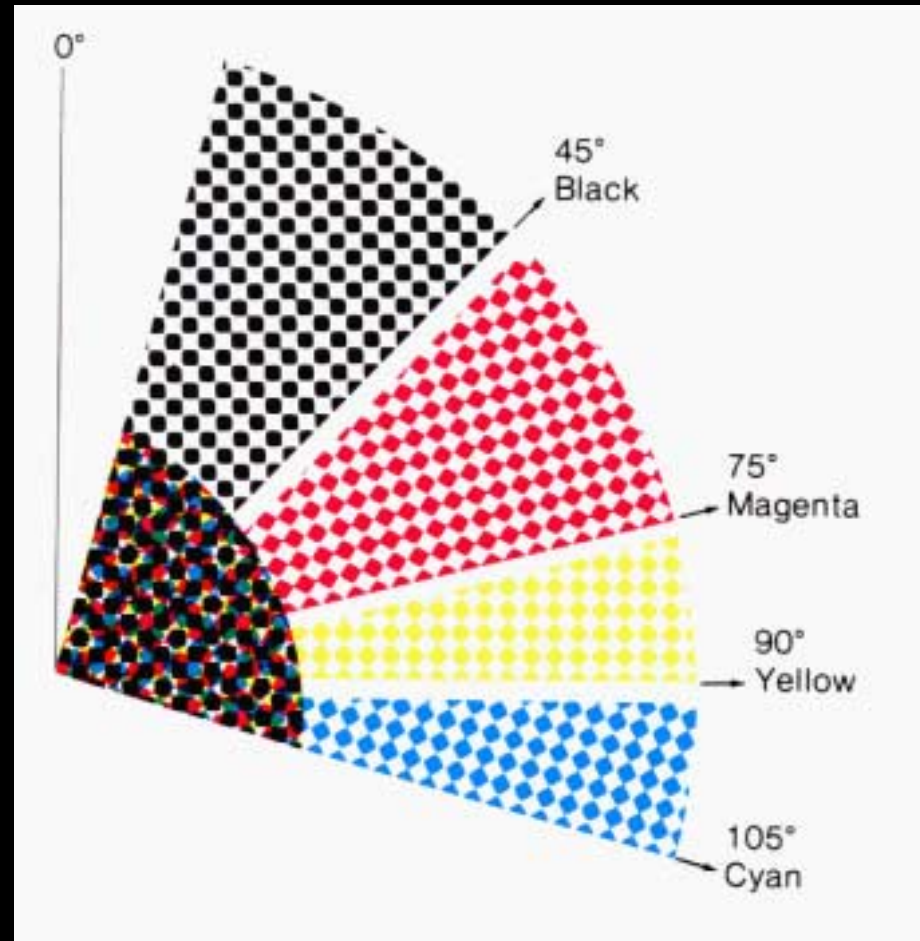
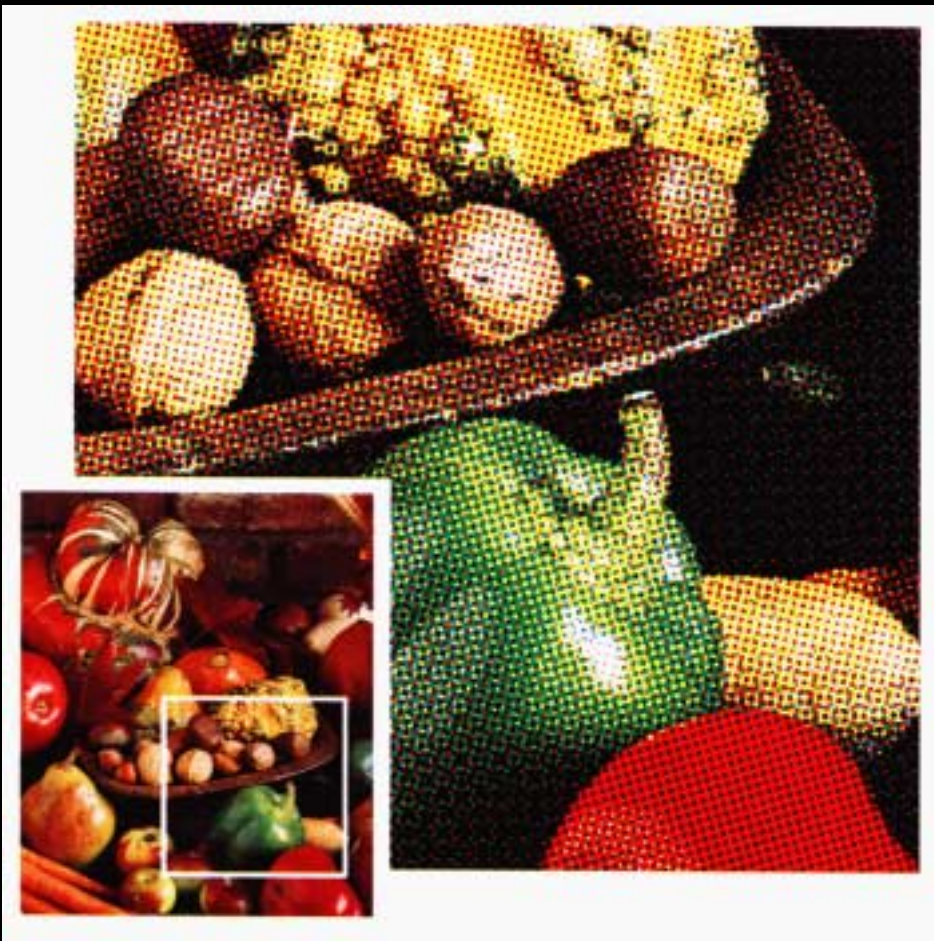


yellow



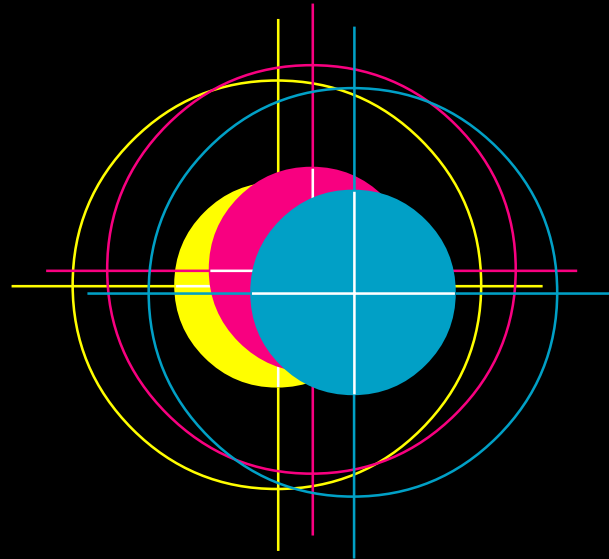
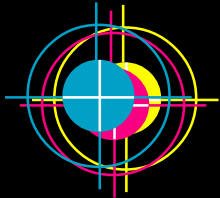
black

Process Color: CMYK



Registration

The process of getting all those dots and lines
to land where they're supposed to



Design for the Press

Avoid mixing multiple values
of CMYK on fine line work entities
such as roads, boundary lines, water edges and outlines

Registering a line defined with 2 screened colors



Registering a line defined with 1 solid color and 1 screened color



Large Areas of Flat Color

Better to keep screen values low
and limit the number of inks used

Knockouts

Traps

&

Overprinting

magenta ink

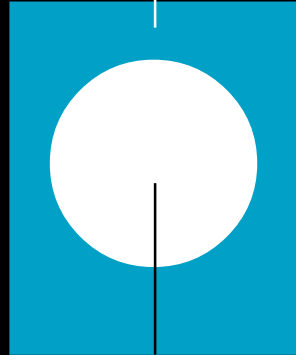


magenta ink



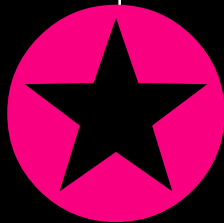
over

cyan ink



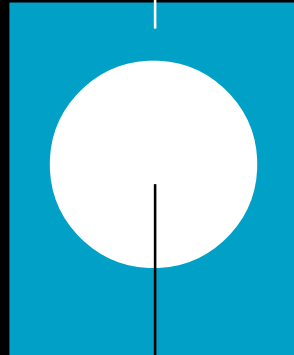
Paper

magenta ink



over

cyan ink

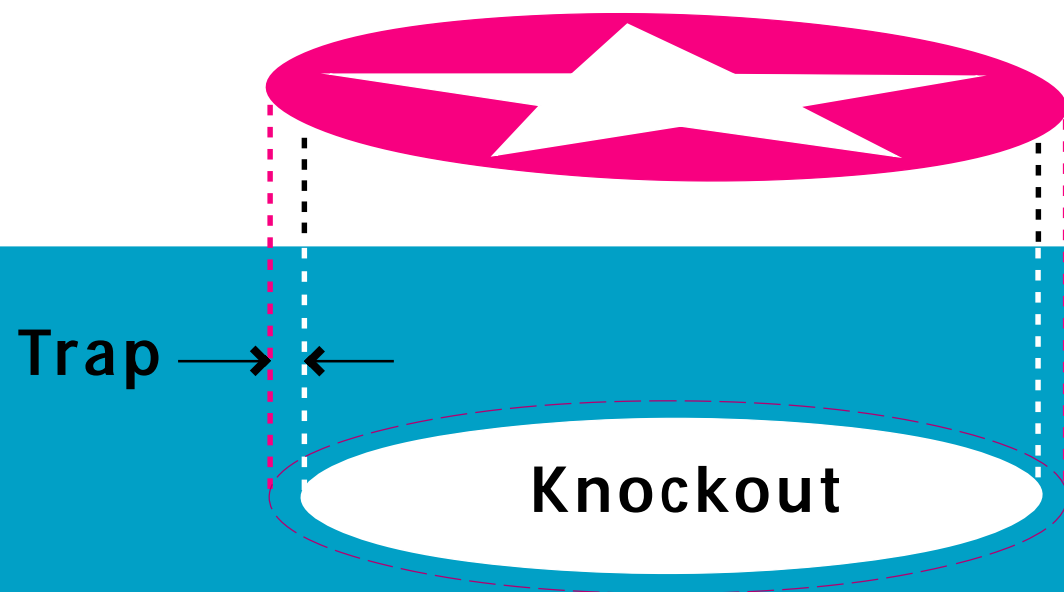


Paper

=

knockout
and trap







possibly acceptable

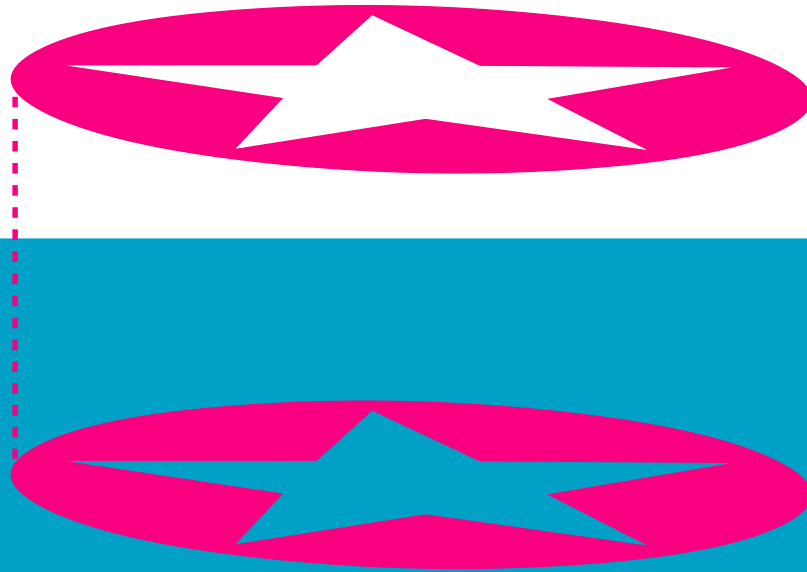


perfect



unacceptable

Overprinting



Press & Paper Options

Sheet Fed Press

Web Press

Coated paper

Uncoated Paper

Dull Coat

Varnish

Folds

Press & Paper Options

Maximum print size and number of ink units are important press specifications that will impact how you design your map

Raster Images

Color images need to be saved in the CMYK color model

Resolution should be 2 times the printer line screen



Raster Images

Try to get a printed proof of your file
before you start making color and density adjustments



Local Print Shops

A knowledgeable sales rep

A strong technical prepress staff

An experienced press operator

Get your files together

Complete and technically sound packages for prepress
help create a good relationship with your printer

Proofing the Proof

A thorough review is essential

Have another person review the proof

Review the proof with your sales rep

Errors that you don't catch in the proof
are your responsibility

The Press Check

Check the paper stock

Bring color swatches

Understand tolerances

Take home a copy of the signed-off press sheet

Delivery

Make sure that the delivered product is
the same as the print you signed off

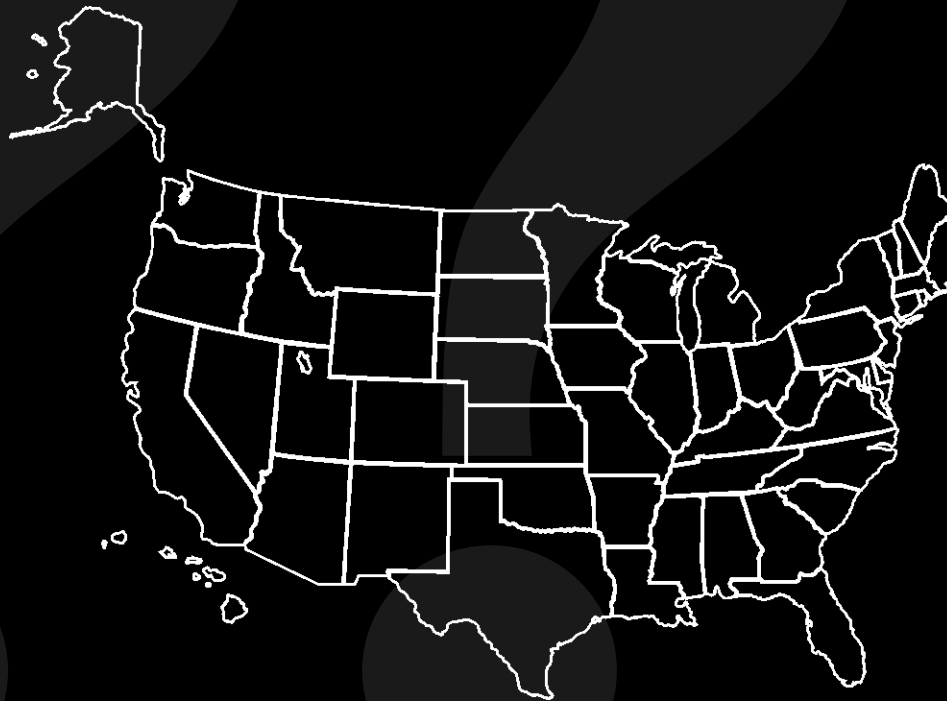
Make sure the product is not damaged

Understand tolerances

Enhanced Digital Orthophoto Map of Boston, Massachusetts



**How many states have
a town or city called Boston?**



Source: DeLorme Street Atlas 7.0



How many states have
a town or city called Boston?

16

9

23

11

Source: DeLorme Street Atlas 7.0

16

Michigan

Missouri

New York

Ohio

Pennsylvania

Tennessee

Texas

Virginia



Alabama

Arkansas

Connecticut

Georgia

Indiana

Kentucky

Louisiana

Massachusetts